

**REMARKS****Status of the Claims**

Claims 1-31, 33, 34 and 43-50 are canceled in the above amendment. Claims 50-61 are added.

No new matter is added by the above amendment. Claim 50 generally corresponds with previously pending claim 13. Support for the feature of vapor impermeability can be found in the specification at page 1.<sup>1</sup> Claims 52-61 corresponding to previously pending claims 14-21, 25 and 29, respectively.

**Issues Under 35 U.S.C. § 112**

Claims 1-3, 6-19, 22-34 and 45-50 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Since the rejected claims were cancelled, this rejection is moot. Additionally, Applicant respectfully submits that this rejection does not apply to the claims currently pending.

This rejection is essentially a repetition of a rejection of record. With respect to the Examiner's comments regarding previously pending Claim 13 (generally corresponding to current Claim 51), the Office Action states that Claim 13 was rejected for the same reasons as Claim 1.

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<sup>1</sup> Specification, page 1, lines 6-9: "These materials and fabrics are used primarily in the manufacture of chemical protective garments and gloves used to isolate wearers from exposure to hazardous environmental conditions. Critical to achieving this objective is ensuring that the fabrics are easily converted into complex designs such as fully encapsulating gas-tight suits."

Claim 1 was rejected because it allegedly “is still not clear what the components of the specific coating composition comprise [sic] which meet the characteristics of puncture resistance and flex crack resistance as stated in the claim.”

Applicant respectfully submits that such reasoning with respect to previously pending claim 13 (and as such, current Claim 51) is flawed because such features are not present in the claim.<sup>2</sup> Features of pending Claim 51 include several characteristics of the coating composition such as melt flow rate, density, and stress-cracking resistance.

As stated in the record, to comply with 35 U.S.C. § 112, second paragraph, the claims merely “reasonably convey” the invention to one of ordinary skill in the art. See, M.P.E.P. § 2173.02 entitled CLARITY & PRECISION. More precise claim language than what “reasonably” conveys is simply not required.

Claim 51 is drafted using common and proper claim language and is definite.

Further, Applicant respectfully submits that it is not proper to reject the claim based solely on the use of “thermoplastic polyolefin elastomer” language. Applicant has provided the Examiner numerous recognized definitions and descriptions of thermoplastic polyolefin elastomers throughout the prosecution of this Application. See, for example, Attachment A to Response filed February 4, 2002, which included a document from Chemical Market Resources. That document states as follows:

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<sup>2</sup> Applicant assumes the allegedly indefinite language from Claim 1 was the following:

“...the coated chemical barrier composite achieving at least 25% improvement in ASTM 1342 puncture resistance and at least 25% improvement in modified ISO 7854 Method B flex-crack resistance of the fabric when compared to a fabric not having said durability barrier layer.”

This assumption is based on the Examiner’s statements in the previous Office Actions and the numerous telephonic and personal interviews conducted in connection with this Application.

Thermoplastic polyolefin elastomers (TPOs) are compounds comprising blends of thermoplastics such as polypropylene (PP) and elastomers such as ethylene-rubber (EPM) or EP(D)M rubber...

TPOs are defined as a blend of thermoplastic and elastomeric phases where the elastomeric content is more than 20% by weight. In recent years, TPOs have gained increasing acceptance over other computing materials because of the global trend toward homogenization of materials usage in automobile interior and exterior applications.

Furthermore, to further emphasize the “reasonably precise” language of the present claims and the fact that thermoplastic polyolefin elastomers are understood in the art, in the previous Amendment filed May 5, 2003, the Examiner’s attention is respectfully was directed to directed to several US Patents describing (and claiming) thermoplastic polyolefin elastomers.<sup>3</sup>

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<sup>3</sup> For the convenience of the Examiner, the language of the patents cited in the previous response is repeated below:

US Patent No. 6,120,714 to Allan, et al. See column 7 lines 9 through 50 where Allan lists the thermoplastic resins preferably used in his invention: “The thermoplastic resin preferably used includes only resins which are generally referred to as thermoplastic resins, for example, ... thermoplastic elastomers such as polyolefin elastomer (TPU) thermoplastic styrene butadiene elastomer (SBC), thermoplastic polyolefin elastomer (TPO), thermoplastic polyester elastomer (TPEE), thermoplastic vinylchloride elastomer (TPVC), thermoplastic polyamide elastomer (TPA-E) and the like; etc.”

US Patent No. 6,376,077 to Hiraishi, et al. See column 5 line 30: “when inorganic particles treated with an amino-containing silane coupling agent or a mercapto-containing silane coupling agent are used for a TPO (thermoplastic polyolefin elastomer) – based resin, high values are maintained in both of tensile strength and elongation.

US Patent No. 5,849,820 to Kim, et al. See Table 16 at column 17 where certain examples have a resin TPO. Below the table the following is stated: “TPO: thermoplastic polyolefin elastomer.”

US Patent No. 5,718,954 to Sano, et al. See examples 35 and 36 at column 31. In these examples, molding products were obtained in the same way as in Example 33 “except that a thermoplastic polyolefin elastomer (TPO) was used in lieu of L-LDPE.”

US Patent No. 5,714,227. See claim 5 which states: “The interior molded article for automobiles is claimed in claim 2, where it is said thermoplastic elastomer has a hardness according to JIS K 6301 A of 10° to 60°, and comprises, as an essential ingredient, a polyolefin elastomer (TPU) a thermoplastic polystyrene elastomer (TPS) or a thermoplastic polyolefin elastomer (TPO), and the ratio of TPS to TPO by weight thereof is from 10/90 to 50/50.”

Thus, it clear that “TPOs” are understood by one of ordinary skill in the art, and are reasonably precise as claimed above. To date, none of the patents or other published information regarding thermoplastic polyolefin elastomers have been addressed by the Examiner. Further, the Examiner has provided no objective support, such as a technical journal article or the like, that is consistent with the position of the Office.

#### Issues Under 35 U.S.C. § 103

Formerly pending claims 1-31, 33, 34, and 43-50 were rejected under 35 U.S.C. § 103 as allegedly being obvious over Langley (US 5,948,708) in view of Stover (US 5,208,098). This rejection is respectfully traversed. However, this rejection is moot in view of the above amendment.

Moreover, this rejection is also not appropriate the pending claims.

The Langley ‘708 patent has been well discussed in the record. This patent fails to disclose or suggest a chemical barrier fabric comprising a thermoplastic polyolefin elastomer (TPO). The present invention comprises a thermoplastic polyolefin elastomer on at least one side of a multiple layer, chemical barrier material.

The assertions of the Office Action appear to based upon an erroneous interpretation of TPO and/or thermoplastic polyolefin elastomers.<sup>4</sup> The Office Action fails to provide any support whatsoever in support for such a definition of TPOs. In view of the information set forth in the record and above, it is clear that TPOs are not generic to thermoplastic polyolefins. As indicated

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<sup>4</sup> The Office Action (page 6) repeats an assertion that “Langley describes layers which can be HDPE, high density polyethylene, polyolefin, among others, which can be considered a TPO, thermoplastic polyolefin, which is the genus that includes thermoplastic polyolefin elastomers.”

This statement is not technically correct.

above, the record is silent as to the voluminous support Applicant as provided regarding the interpretation of this term as known in the art. Also, as stated above, the Examiner has provided no objective support for the interpretation used in the Office Actions.

Nonetheless, it cannot be reasonably disputed that Langley '708 discloses a TPO with the characteristics (i.e., melt flow rate, density, environmental stress-cracking resistance) described in the pending claims.

The secondary reference, Stover, fails to remedy the deficiencies of Langley '708. Additionally, there is no motivation to combine the references.

Obviousness can only be established by combining or modifying the teachings of the prior art references where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See MPEP § 2143.01.

Langley '708, entitled VAPOR PROTECTION SUIT AND FABRIC HAVING FLASH FIRE RESISTANCE, shares a common feature with the claimed invention in that the material is vapor impermeable. For example, see Langley '708 at col. 1, lines 39-31 ("Perhaps the most severe of these is associated with industrial accidents or spills involving materials which are unknown to the response team. In these environments the use of a totally encapsulating vapor protective suit is a virtual necessity."), and col. 4, lines 54-58 ("It is to be understood that a totally encapsulating suit is one which enclosed the entire body of the wearer and his breathing apparatus and is intended to be impermeable to vapors and liquids.")

On the other hand, Stover discloses a vapor-permeable product. See, for example, Stover at col. 3, line 27; col. 5, first line of the "Summary of the Invention" section; and col. 14, lines

60-63 (“...if the calendering roll temperatures are too high, the web and porous film layers will fuse and form a substantially impervious film and thereby negate the air permeability properties of the composite...”).

The Office Action proposes that one of ordinary skill in the art would be motivated to combine the references because of “the expectation that there would be an improvement in general protection and chemical protection as noted in Stover.” See the Office Action at page 7.

However, the inconsistencies noted above negates any motivation for one of ordinary skill in the art to combine these references in the manner suggested by the Examiner. In order to achieve vapor impermeability, one of ordinary skill in the art would not add “composites [that] find particular use for vapor-permeable and liquid-impermeable product applications...” See Stover at col. 3, lines 26-28 (cited in the Office Action in support for this rejection).

Furthermore, the Stover patent fails to disclose or suggest the thermoplastic polyolefin elastomer claimed in Claim 51.

In view of the above, Applicant submits that the rejections should be withdrawn, and that this Application is in condition for allowance.

#### Petition for an Extension of Time

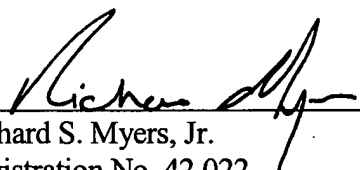
Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), Applicant hereby petitions for an extension of two months to January 2, 2004 (following Government Holiday) for the period in which to file a response to the outstanding Office Action. The required fee of \$420.00 is attached hereto.

Conclusion

From the foregoing, further and favorable reconsideration in the form of a Notice of Allowance is in order and such action is earnestly solicited.

If the Examiner has any questions concerning this Amendment or the Application in general, he is respectfully urged to contact Richard S. Myers, Jr. (Reg. No. 42,022) at the number listed below.

Respectfully submitted,

  
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